DO PEER RELATIONSHIPS FOSTER BEHAVIORAL ADJUSTMENT IN CHILDREN WITH LEARNING DISABILITIES?

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Abstract. **This article reviews the literature on peer relations and social skills of children with learning disabilities (LD). Two risk models are discussed. The single-risk model suggests that for some children with LD, social skills deficits are inherent in the disability. These deficits lead to problems with social relationships, which foster internalizing behavior problems. The multiple-risk model suggests that internalizing and externalizing behavior problems typically result when more than one risk factor is present. These additional risks might include comorbid attention-deficit/hyperactivity disorder, poverty, English as a second language, inadequate educational accommodations, and ineffective parenting. However, the risk of behavior problems is reduced if children with LD are able to establish healthy social relationships.**

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This article will demonstrate how the peer relationships of children with learning disabilities (LD) are pivotal to their behavioral adjustment. To do so, the literature pertaining to differences between children with and without LD will be reviewed in terms of their peer status, friendships, experiences of peer victimization, and loneliness. The discussion will then turn to how these group differences might be associated with deficits in social skills and social problem solving. Two models that might explain why children with LD are at risk for behavioral adjustment problems will also be presented. The article will conclude by examining how positive relationships might enhance the adjustment of children with LD and discussing implications for practitioners. In addition to citing relevant empirical studies, these issues will be illustrated using quotes gathered from children with LD, their parents, and teachers in two previously published studies (Shea & Wiener, in press; Wiener & Sunohara, 1998).

PEER RELATIONSHIPS

Researchers who study peer relationships in children typically investigate four aspects of those relationships: peer status, friendship, peer victimization, and loneliness. Although these areas are interrelated, it is important to differentiate them because they are associated with behavioral adjustment in different ways.

Peer Status

> *This girl right beside him moved her chair as far away from him as she could and she kept moving it over and trying to sit like this, so she was totally, with her body language and everything, removing herself away from him. I see the looks that they shoot him – like, you're weird …* (Shea & Wiener, in press)

Peer status is defined as the extent to which children are liked or disliked by groups of peers they encounter regularly, such as classmates (Schneider, Wiener, & Murphy, 1994). Children may be evaluated in terms of the degree to which they are liked (acceptance/popularity) or disliked by most children (rejection). When nomination sociometrics are used (i.e., when children are asked to nominate a designated number of children they like or dislike), some children receive very few nominations in either category and are termed neglected (Coie, Dodge, & Coppotelli, 1982). Investigating peer status in children with LD is important because children who are rejected by peers are at risk for a variety of disorders in childhood and adulthood (Bagwell, Newcomb, & Bukowski, 1998).

One of the most consistent findings in the literature on children and adolescents with LD is that they are less likely to be socially accepted and more likely to be socially neglected and rejected by peers than typically functioning children (see Kavale & Forness, 1995; Swanson & Malone, 1992; Wiener, 1987, for reviews of this literature). Bryan (1976) found that children with LD maintained their low peer acceptance over a period of two years even though teachers and classmates had changed.

The peer status of children with LD declines over the course of a school year; that is, many children with LD who have average social status at the beginning of the school year are seen as neglected or rejected by the end of the school year (Kuhne & Wiener, 2000; Vaughan, Elbaum, & Schumm, 1996). Peer rejection of children with LD is high in studies of children in contained special education classes (Wiener, Harris & Shirer, 1990), of children in mainstream settings who are pulled out to go to a resource room (Stone & La Greca, 1990), and of children in fully inclusive settings (Vaughan, Elbaum, & Schumm, 1996). Peer neglect, however, is most common for children with LD in self-contained special education classes (Coben & Zigmond, 1986; Wiener, Harris, & Duval, 1993). Finally, peer acceptance is lower in children with LD who receive special education assistance in a resource room than those who receive instruction from a special education teacher in the general education classroom (Wiener & Tardif, 2004).

Friendship

> *He doesn't quite understand that a friend is someone that you talk to on a regular basis, go out with on a regular basis. He thinks because he knows twenty different kids, they're friends.* (Wiener & Sunohara, 1998)

Contemporary research in peer relations has adopted Sullivan's (1953) distinction between peer acceptance/popularity, which refers to status in the group, and friendship, which is a close, intimate, mutual dyadic relationship. Sullivan viewed the friendship experience as a highly significant component of preadolescent development in that children acquire interpersonal sensitivity and receive validation of the components of their self-worth through this dyadic relationship. Important features of friendship that have been investigated in children with LD include the number of friends they have, who they select as friends, the stability of their relationships, and the quality of their relationships (Wiener, 2002).

Children with and without LD do not differ in the number of friends they report having (e.g., Wenz-Gross & Siperstein, 1997; Wiener & Schneider, 2002). However, most studies that investigated friendships reciprocally (i.e., corroborating friendship nominations by asking the nominated friends about their friendships, or by asking parents and teachers about the children's friends) have found that children with LD have fewer mutual friendships than children without LD (Tur-Kaspa, Margalit, & Most, 1999; Vaughn & Elbaum, 1999; Vaughn et al., 1996). Furthermore, the friendships of children with LD in grades 4-6 are less stable than those in children without LD (Wiener & Schneider, 2002).

Like other children, the vast majority of the friends of elementary school children with LD are same-sex peers. However, children with LD (6%) are more likely to report that they have friends two or more years younger than them than children without LD (<1%; Wiener & Schneider, 2002). Children who select younger friends are typically seen as socially immature by their mothers (Wiener & Sunohara, 1998). Not surprisingly, children with LD are more likely to have friends with teacher-rated learning problems (although not necessarily identified as having learning disabilities) than children without LD (Wiener & Schneider, 2002). This may be due to the general pattern of children selecting friends who are similar to them in achievement. It may also be due to propinquity being a factor in friendship formation. That is, children with LD may be grouped for instruction with other low achievers and, as a result, choose them as friends (Schneider et al., 1994). Further, children with LD also tend to report more friendships with children who do not go to their school (Wiener & Schneider, 2002).

The quality of friendships of children with LD is an area of concern. Companionship, or sharing activities, is a cornerstone of friendship in early to middle childhood, with issues such as intimacy, validation and caring, and loyalty becoming more prominent as children move into the preadolescent years (Schneider et al., 1994). Comparisons of children with and without LD in terms of the quality of friendship have typically

found that overall the quality is lower in children with LD. Studies vary, however, in the identified aspect of friendship quality that tends to be problematic in children with LD, possibly due to differences in the instruments used to assess friendship quality. Compared to children without LD, the relationships of children with LD involve less contact with friends (Wenz-Gross & Siperstein, 1997; Wiener & Schneider, 2002), less intimacy and validation (Vaughn & Elbaum, 1999; Wenz-Gross & Siperstein, 1997; Wiener & Schneider, 2002), and more conflict (Wiener & Schneider, 2002). Children with LD also report more problems with relationship repair (i.e., the ability to resolve conflict with friends) than children without LD (Wiener & Schneider, 2002).

Peer Victimization

Interviewer: *How does it make you feel when kids bully you?*
Alan: *Lonely. Makes me feel embarrassed and sad ... angry.*
Interviewer: *What do you do?*
Alan: *I just walk away.*
Interviewer: *What do you do with all that anger and sadness?*
Alan: *I let it out when I get home ... or I just deny. I go upstairs to my room, close the door, and start screaming and shouting at the top of my lungs.*
Interviewer: *Does that help?*
Alan: *No.* (Shea & Wiener, in press)

Although most school-aged children report that they were bullied during their school years, most do not experience chronic victimization. Nevertheless, approximately 10% to 20% of children report being victimized by peers on an ongoing basis (Pepler & Craig, 1995). Chronic peer victimization is associated with an increased risk for adjustment problems, including anxiety, loneliness, depression, social withdrawal, low self-esteem, suicidal tendencies, dislike and avoidance of school, and poor academic performance (Boivin, Hymel, & Bukowski, 1995; Rigby, 2001). Some children are both bullies and victims, termed "provocative victims." They typically display the anxiety, depression, and low self-esteem of victims and the high levels of dominance, aggression and antisocial behavior of bullies (Olweus, 2001).

Three types of bullying are described in the research on peer victimization: (a) physical bullying involves physical aggression where there is a power imbalance: (b) verbal bullying includes malicious teasing, name-calling, threats of physical harm, and other types of verbal harassment; and (c) relational bullying involves damage to a child's social relationships through gossiping, exclusion from a group, or threatening the withdrawal of a friendship (Crick, 1995).

The literature on peer victimization in children with LD is limited (Mishna, 2003). The results of the three studies found indicated that children and adolescents with LD in elementary and middle school were more likely to be victimized by peers than children without LD (Martlew & Hodson, 1991; Nabuzoka & Smith, 1993; Sabornie, 1994). Nabuzoka and Smith found that girls with LD and children with LD who were seen by their peers as shy were most likely to victimized. As stated by Mishna (2003), the combination of risk factors involved in having a learning disability and being victimized by peers substantially increases their "chance of experiencing social and emotional problems – a combination that constitutes double jeopardy" (p. 336).

Loneliness

They all use me … for my games and stuff. So, I just stay here and wait for someone to come over, "Can I play your Play Station?"… Fine, use it! All I want is someone to just play with at least … I don't care. (Shea & Wiener, in press)

Loneliness is an aversive subjective experience involving sadness, and alienation from the people and things that are important to the individual. It is different from solitude or being alone, in that solitude can at times be a positive experience (Margalit & Al-Yagon, 2002). Most of the studies on loneliness of children with LD were done by Margalit and her colleagues (see Margalit & Al-Yagon, 2002, for a review), who consistently found that 7- to 15-year-old children with LD were more likely to experience loneliness than their average-achieving classmates.

Margalit and Al-Yagon (1994) identified two subtypes of 9- to 15-year-old children with LD who were lonely. The highly externalizing group, comprising approximately 29% of the sample, had severe problems with self-control, aggression, and peer rejection. Children in the highly internalizing group, on the other hand, comprising approximately 31% of the sample, were described by their teachers as withdrawn, and displayed no signs of problems with self-control.

Margalit and Al-Yagon (2002) discussed some of the strategies children use to cope with or avoid loneliness. Children who are not frequently lonely tended to either engage in an active search for social contacts and friends or to develop active solitary activities such as exercising, studying, working, reading, playing on personal computers, and listening to music when they do feel lonely. Highly lonely/highly externalizing children typically used less adaptive strategies such as asking adults and peers for help and displaying their frustration through aggressive and disruptive behaviors. The highly lonely/highly internalizing children used avoid-

ant coping behaviors, referred to by the investigators as "sad passivity." These behaviors included crying, excessive sleeping, sitting, thinking and doing nothing, overeating and watching television. It is likely that many of these children had a depressive disorder in addition to a learning disability.

SOCIAL SKILLS AND SOCIAL PROBLEM-SOLVING DEFICITS

Rubin, Bukowski, and Parker (1998) define social skills as "discrete behaviors that lead children to solve social tasks or achieve social success" (p. 644). They suggest that developing a list of discrete social skills is probably impossible because social skills vary with time, context, and culture. They claim, however, that certain generic skills do exist, including (a) understanding the thoughts, emotions and intentions of others; (b) abstracting information about the social partner and the milieu in which the potential interaction is to take place; (c) understanding the consequences of one's social actions for the self as well as for the target; (d) making mature moral judgments that serve to guide social action; (e) generating various means by which to strike up a conversation or interaction, to maintain one, and to end on a positive note; (f) communicating verbally and nonverbally in ways that will result in the partner's social comprehension; (g) attending to other's communicative attempts and being willing to comply with the requests of the social partner; (h) behaving positively and altruistically; (i) appropriately expressing positive emotions and inhibiting negative ones; and (j) inhibiting negative behaviors that might result from negative thoughts and feelings about the social partner.

The first four of these skills may be classified as social cognitive abilities, skills (e) through (g) as social communication skills, skill (h) as prosocial behavior, and skills (i) and (j) as emotion regulation skills. These generic skills will now be discussed in relation to children with LD.

Social Cognitive Abilities

Dan: *But most of the time they're just kidding with the other boy.*
Interviewer: *They're not kidding with you?*
Dan: *Yeah, sometimes they are*
Interviewer: *Is it hard to tell when they're just kidding?*
Dan: *Yes! (emphatic)*
Interviewer: *Does the way you react change whether it was kidding?*
Dan: *Yeah, sometimes.*
Interviewer: *How can that change it?*
Dan: *Like if they were kidding I might not yell at them and stuff but I don't know that.* (Shea & Wiener, in press)

Children with LD have been found to be deficient in interpreting nonverbal social information such as facial expressions (see Maheady & Sainato, 1986, for a review) and predicting what other children might think or feel (e.g., Bruck & Hébert, 1982; Horowitz, 1981). Their deficiencies on this type of task have been found both in studies that assess the skill through laboratory tasks where children were required to interpret pictures, stories or videotapes and in studies employing teacher rating scales (Stiliadis & Wiener, 1989). For example, Schneider and Yoshida (1988) found that children with LD were less competent than children without LD on several social problem-solving tasks, including describing the types of problems people face in everyday life, articulating alternative courses of action when faced with a social problem presented in a story, describing the steps required to solve a problem (including mentioning time lines and potential obstacles), and indicating the causes of social problems presented in a story.

Social Communication Skills

> *You're friendly, and you know, you talk, and people listen and you talk and you listen and before you know it you have a friend. But it's not that easy for a kid like Adam. When he feels very new, he just doesn't know how to connect, how to meet somebody. You know, "Hi, how are you? What's your name? What school do you go to?" He doesn't know how to do that.* (Wiener & Sunohara, 1998)

The communication skills of children with LD have been studied in two ways. In some studies, structured social communication tasks such as the "TV Talk Show" role-playing procedure were used (Bryan, Donahue, Pearl, & Sturm, 1981). On this task, children conversed in dyads for 3-minute periods, with each child alternately playing the role of host and guest on a talk show. Children with LD were cooperative conversational partners in that they engaged in turn taking to the same degree as children without LD (Bryan et al., 1981). However, their strategies for initiating and sustaining the interaction were less efficient than those of the children without LD. As hosts they asked fewer questions, and most of their questions were choice or product questions (e.g., "Do you like to play baseball?"; "What team do you play on?") as opposed to process questions (e.g., "Why do you like to play baseball?"). Choice or product questions are less likely to lead to elaborated responses than process questions. Instead of using a response to a choice or product question to generate a process question (e.g., "I really like baseball" may lead to the question "Why do you like baseball?"), children with LD more often than children without LD responded with a conversational device (e.g., "uh

huh," "okay"). As a result, their guests produced fewer elaborated responses than the guests of children without LD, and appeared more uncomfortable (as measured by non-functional body touching). As stated by Bryan et al., children with LD were unable to maintain the initiating role effectively even in a context that facilitated it.

The second type of study of social communication skills involved observing children with LD conversing with peers in simulations of play or classroom environments. Wiener and Harris (1993) videotaped children with and without LD during two 10-minute sessions (one in dyads and one in groups of six) during which they were asked to work together to build an object of their choice using "junk" materials. In dyads, children with LD initiated less communication (except for requesting clarification) than children without LD, and were less likely to respond to others' initiations unless they received directives that explicitly required a response. In the groups of six, boys with LD made self-centered statements (e.g., "Look at me, I'm making a rocket ship.") more frequently than boys without LD, more often had these statements followed by no response, and more often had their questions responded to with an inconclusive statement (i.e., "I don't know."). Boys with LD were also less likely to give instructions and directions, to give suggestions, and to respond to the initiations of others than boys without LD. In the groups, boys with LD often disagreed with each other, frequently making competitive statements and engaging in object-position struggles. In girls' groups, girls with LD were quite passive. They were less likely to initiate; to have their initiations responded to with agreement, acknowledgment and information; to give information; to make group-oriented statements; to give opinions; and to have these opinions responded to than girls without LD. Sociometric data revealed that children without LD who participated most actively were more liked whereas more active children with LD were less liked. Not surprisingly, object-position struggles were negatively correlated with peer acceptance.

Prosocial Behavior

> *Well, I think Greg's very non-threatening, very accepting, and very loyal. He never says a bad word about anybody ... I think that he's just a very safe friend in a lot of ways.* (Wiener & Sunohara, 1998

The eighth social skill in Rubin and colleagues' (1998) list of generic skills involves prosocial behavior. Considerable evidence suggests that children with LD have problems in this area, although it is not clear whether they are less prosocial or whether they just do not know how to demonstrate their prosocial feelings. In studies employing peer sociometrics, children with LD have been rated as less cooperative and as having less developed leadership skills than children without LD (Wiener et al., 1990). Children with LD are seen by teachers to be deficient in social skills overall, and specifically to be less assertive than children without LD (Gresham & Reschly, 1986). Furthermore, these social skills difficulties were correlated with peer acceptance.

Emotion Regulation Skills

> *I had a really bad temper. I HAD, a temper. But now I never like, get very angry and stuff. And usually when something like really, really, really bad happens to me that I cannot stand, that I can't like ignore, and then I get really, really angry and my face turns really red and I just go berserk.* (Shea & Wiener, in press)

The final two generic skills listed by Rubin et al. (1998) pertain to emotion regulation. The evidence is strongly suggestive that problems with emotion regulation in children with LD are associated with high levels (approximately 30%) of comorbid ADHD (Flicek , 1992; Wiener et al., 1993). This will be discussed further below.

RISK MODELS

Figures 1 and 2 depict possible pathways for social relationship and social and behavioral problems in children with LD. The pathway depicted in Figure 1 shows a direct link between LD and relationship problems, suggesting that the social deficits inherent in LD are sufficient in themselves to lead to relationship problems and internalizing behavior problems. Figure 2 presents a multiple-risk model. Here the pathway suggests that relationship difficulties and internalizing and externalizing behavior problems are much more likely to occur if additional risk factors compound the problems of children with LD. Currently, there appears to be insufficient research to develop a resilience model showing how positive social relationships foster social and emotional adjustment in children with LD. However, a study by Al-Yagon and Mikulincer (2004) suggests promising directions for future research in this area.

Learning Disabilities as a Risk Factor for Behavioral Adjustment

> *Robert's going to be a teenager in September and he still plays with cars in the bathtub, so, he doesn't have the maturity …When I think he should be going into grade 8, oh my God! … He's more at a grade four or five level.* (Shea & Wiener, in press)

The single-risk pathway suggests that the cognitive deficits of some subtypes of children with LD are linked with social skills deficits. The research on the social and

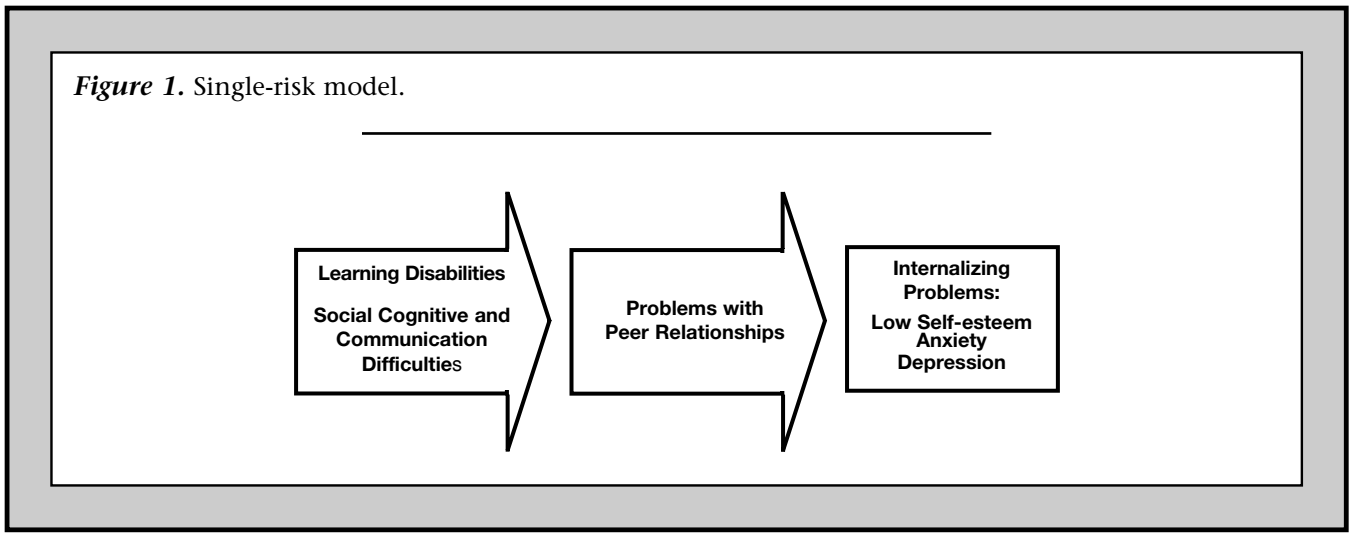


Figure 1. Single-risk model.

emotional problems of children with nonverbal LD (Rourke, 2000) is supportive of this pathway. In spite of strong verbal and phonological rote memory skills, children with nonverbal LD have deficits in visual and tactile perception, attention, memory, nonverbal concept formation and problem solving, complex psychomotor skills, learning novel material and skills, and social perceptual and verbal deficits involving pragmatics of language and prosody. These deficits are likely associated with difficulties in reading comprehension, mathematics calculation and problem solving as well as psychosocial and adaptive behavior difficulties. These psychosocial difficulties include problems in peer relationships and heightened risk of depression (Greenham, 1999; Rourke, 2000).

Children and adults other than those who have nonverbal LD may also be at risk for social and emotional difficulties even if they do not have other risk factors. For example, Case (1991) has argued that at about the age of 6 children's cognitive development shifts considerably, and that they enter what Case terms the "dimensional stage." During this stage they are able to conceptualize variables in a quantitative, as opposed to simply qualitative fashion. During middle childhood there is significant growth in working memory capacity and speed of information processing, and it is this growth, according to Case, that is the engine of change in conceptual structures. The result is that children are able to simultaneously consider more dimensions as they mature.

In the social domain, Case referred to *intention* as opposed to *dimension* as the core construct. He found that at the age of 4 children are typically pre-intentional; they explain social phenomena in terms of the behavioral actions of people as opposed to people's intentions. Thus, when presented with scenarios in which a mother protects a child who is in some type of danger such as a fire, pre-intentional children explain the mother's action in terms of the danger (e.g., "because there is a fire in their room"). Children are able to consider intent in terms of internal states at about the age of 6, but typically can think about only one intent at a time. In the same scenario, 6-year-olds typically referred to the mother's desire for the child not to get hurt. At the age of 8, children can simultaneously consider two intentions (e.g., "she loves her child and she does not want her to get hurt"). At the age of 10 the child can take into account multiple behavioral episodes and the internal states and judgments that accompany them.

On the basis of a series of studies, Case (1991) concluded that "the executive control structures children assemble for dealing with a broad range of specific social situations depend on the existence of a central conceptual structure that they have constructed for modeling social interaction" (p. 360). Furthermore, children's central conceptual structures in the social domain are similar to those in the domain of number, and the similarities in both structures may be a result of constraints in working memory and speed of processing. As there is considerable evidence that many children with LD have deficits in both working memory and speed of processing (see Swanson & Saez, 2003, for a review), it is conceivable that the development of their ability to consider and integrate multiple intentions and behavioral phenomena may be delayed.

A likely implication of Case's developmental theory is that children with working memory and speed of processing deficits would have problems with encoding

and interpretation of cues. Thus, if children with LD consider intent in a unidimensional way, they may make erroneous or unsophisticated interpretations of a social interaction. They may also be deficient in considering several alternative courses of action and simultaneously evaluating them in terms of their potential consequences.

Multiple Risks

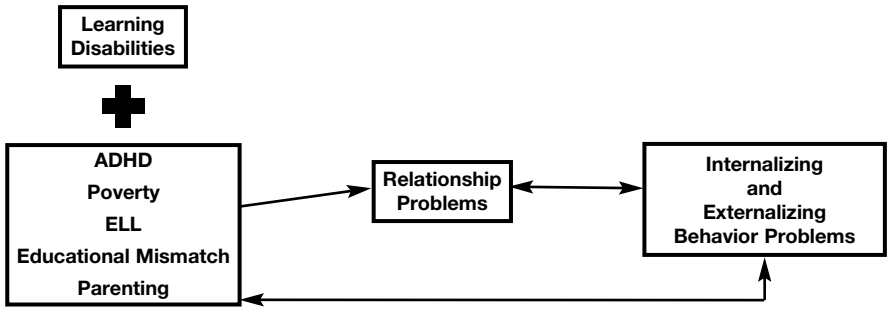
The pathway shown in Figure 2 indicates that children with LD who have risk factors in addition to LD are more likely to have relationship problems that facilitate internalizing and externalizing behavior problems than children with LD who do not have additional risk factors. For the most part, research in developmental psychopathology has shown that single-risk factors (e.g., poverty) do not tend to lead to negative outcome. However, the more biological and environmental risk factors that are present, the more negative the outcome (Sameroff, Seifer, & Bartko, 1997). Thus, the second pathway suggests that learning disabilities in combination with risks such as ADHD, poverty, background as an English language learner (ELL), an educational environment that does not accommodate the children's needs, or problematic parenting are more likely to lead to social relationship difficulties and internalizing and externalizing behavior problems. Although there is considerable research on the association between these risk factors, social relationship problems, and internalizing and externalizing behavior problems in the general population, for the most part, the connections have not been specifically delineated in children with LD. The exceptions are comorbidity with ADHD and studies investigating the classroom environments of children with LD.

Comorbidity with ADHD

> *A lot of people at that school didn't like me cause they thought I was weird. Well, in a way I am a little weird cause some of the things I do are, yes, weird. I'm different. I make weird noises and stuff. That was before. I never do that any more.* (Shea & Wiener, in press)

A few studies have investigated the increased risk of comorbid LD and ADHD over having just one of the two disorders. For instance, Flicek (1992) and Wiener and colleagues (1993) found that while children with LD were more likely to be rejected by their peers than typically functioning children, children with both LD and ADHD were most at risk for peer rejection. The children with ADHD only were not at risk for being rejected by peers. Teachers and peers perceived the children with LD and the children with comorbid ADHD and LD to be less cooperative and assertive and to have more poorly developed leadership skills than typically functioning children. The children with ADHD without LD, however, did not differ from typically functioning children in terms of cooperation and leadership. Children with LD who did not have ADHD were seen as less assertive than normally functioning children. While children with LD who did not have ADHD were indistinguishable from typically functioning children in terms of peer-rated disruptiveness and aggression, children with ADHD and children with both ADHD and LD were seen by peers to display high levels of both behaviors. Similarly, teachers viewed children with ADHD and comorbid ADHD and LD to have problems with self-control, but perceived children with LD only to behave similarly to typically functioning children in that regard.

Figure 2. Multiple-risk model.



Educational Mismatch

> *I think that school, for John, is an absolute nightmare, in every possible way. He absolutely despises school and everything that goes with it. And I think he just identifies those children with school. It's the thing that he has to do. He has to be in the presence of these kids six hours a day.* (Wiener & Sunohara, 1998)

According to Greene (1996), goodness-of-fit is defined as "the notion that a fundamental aspect of interactions between children and adults is the degree of 'compatibility' between the capacities, motivations, and style of behaving of a child and the expectations and demands of an adult" (p. 206). Goodness-of-fit may be viewed as a mechanism for understanding the interactions of students with LD and their teachers because the academic and social skill deficits associated with LD are problematic in the classroom. Because student and teacher characteristics operate in combination to produce what Greene refers to as "student-teacher compatibility," teacher characteristics must be considered in light of their possible contributions to the problems that students with LD experience in school classrooms.

Stanovich and Jordan's (1998) pathognomonic-interventionist continuum provides a basis for examining the challenges children with LD experience in the classroom. The pathognomonic end of the continuum is characterized by the belief that learning or behavioral problems exist within the pupil. Teachers holding pathognomonic beliefs request psychoeducational assessments to confirm the existence of a condition, do not try many prereferral interventions, and expect the student to be placed in a segregated special education program after diagnosis. Teachers at the interventionist end of the continuum, on the other hand, believe that their pupils' learning problems result from the interactions between the pupil and the school environment, request assessments to identify students' learning styles, strengths and needs, try prereferral interventions prior to requesting assessments, expect resources to be provided to them to assist in solving the problem, assume that special education teachers will fit their programming into the general education classroom curriculum, and involve parents as part of the problem solving team (Stanovich & Jordan, 1998).

Compared to teachers with pathognomonic beliefs, teachers who hold interventionist beliefs orchestrate higher-quality academic interactions with students, interact more with exceptional or at-risk students, and are more confident in their ability to deal with these students. Furthermore, the exceptional pupils in the classrooms of teachers with interventionist beliefs have a more positive perception of their academic abilities and peer relationships than exceptional pupils in classrooms of teachers with pathognomonic beliefs (Jordan & Stanovich, 2001).

Relationship Factors That Enhance Social and Emotional Adjustment

> (Role of father) *He sees Doug differently than I do, so he basically fills other needs. Like he takes him to movies, and plays Nintendo, and does that sort of thing with him. Actually, it's really good that he's been like that because all those years when Doug didn't have a friend, at all, he had a Dad.* (Wiener & Sunohara, 1998)

Considerable research shows that positive relationships enhance adjustment and are, indeed, protective factors that promote resilience in children who otherwise are at risk. Thus, children who are securely attached to their parents have better social and emotional outcomes than children with insecure attachments. Furthermore, children from disharmonious families who have mentors who are not members of their immediate families are more likely to have positive outcomes than children who do not have mentors (Jenkins & Smith, 1993). In addition, children who have high-quality close friendships are likely to have high self-esteem, and are not likely to be victimized by peers, nor to have internalizing or externalizing behavior problems (Newcomb & Bagwell, 1996). Few studies have carefully examined these factors in children with LD.

Al-Yagon and Mikulincer (2004) examined the degree to which attachment style and feelings of closeness to teachers mediated the association between LD and social and emotional adjustment in children in grades 3 to 5. Children with LD were found to have lower attachment security and more attachment avoidance and anxiety in their close relationships than did children without LD. Children with LD also viewed their teachers as more rejecting and less available. In children with LD, attachment style in close relationships mediated social and emotional adjustment; children with LD with a more secure attachment style showed a higher sense of coherence, lower feelings of loneliness, and higher teacher evaluations of their academic performance. Children with LD who indicated that they felt close to their teachers had a higher sense of coherence, higher teacher ratings of their academic functioning, and lower loneliness scores.

The literature also suggests that some children with LD have personal characteristics that lead them to become popular with peers. Popular children with LD tend to be viewed by peers as smart, athletic, or good-looking (Siperstein, Bopp, & Bak, 1978), and as more cooperative and less aggressive, dependent, and disruptive than their less accepted counterparts (Wiener et al.,

1990). Teachers tend to view them as being more socially perceptive than other children with LD (Stiliadis & Wiener, 1989).

CONCLUSION AND IMPLICATIONS

> *I think Jeff's friends are also very comfortable being here because it's kind of an open, friendly, household, and there's no friction ...* (Wiener & Sunohara, 1998)

Considerable research has documented the social skill deficits of children with LD and their difficulties with peer relationships. Although social skills deficits are associated with their problematic peer relationships, the data suggest that a multiple-risk model should be explored. Comorbid ADHD, social factors such as poverty and parents not speaking fluent English, a school environment that does not meet their needs, and problematic parenting might impact the peer relationships and behavioral adjustment of these children. Secure global attachment and feelings of closeness with a teacher may be protective factors.

Parents of children with LD in Wiener and Sunohara's study (1998) suggested several methods that parents can use to foster the social relationships of their children. They claimed that making the home an inviting place for friends to visit is extremely important. They also indicated that it is important to foster their children's strengths in nonacademic activities because in those environments they may find compatible friends. This recommendation is supported by studies showing that popular children with LD have intellectual, athletic, and personal strengths.

The implication of the multiple-risk model is that interventions such as social skills training, which have modest effects on peer relationships and social and emotional adjustment (Kavale & Forness, 1995; Wiener & Harris, 1997), do not constitute a comprehensive treatment plan in the social and emotional domain. Instead, coaching children in social skills and social problem solving should be supplemented with medication to control ADHD symptoms (when warranted) and systemic interventions. Some of these systemic interventions might include buttressing social and economic supports to families that are experiencing poverty or are new immigrants, providing concentrated instruction in English as a second language to children with LD and their parents, placing children with LD in classrooms with interventionist teachers, and offering psychoeducational programs for parents.

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NOTES

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